



Docket No. BIO 5015NP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Yaron Keidar

Serial No. : 10/624,151

Art Unit: 3739

Filed : July 21, 2003

Examiner: Vrettakos

For : Ablation Device with Spiral Array Ultrasound  
Transducer

I hereby certify that this correspondence is being deposited with the  
United States Postal Service as first class mail in an envelope addressed  
to: Commissioner For Patents, BOX RCE, P.O. Box 1450, Alexandria, VA 22313-1450 on

May 5, 2005

(Date of Deposit)

Vincent J. Serrao

(Name of applicant, assignee, or Registered Representative)

/Vincent J. Serrao/

Vincent J. Serrao, Reg. # 47,072

(Signature)

May 5, 2005

(Date of Signature)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).

Applicant(s) reserve(s) the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this

information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist.

☒ In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified national application (other than a continued prosecution application under §1.53(d)), within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of a request for continued examination under §1.114, no additional fee is required.

☐ In accordance with §1.129(a), this Information Disclosure Statement is being filed in connection with ☐ the first or ☐ second After Final Submission, therefore:

- ☐ Statement in Accordance with §1.97(e) (attached); or
- ☐ Please charge Deposit Account No. 10-0750/ / the fee of \$180.00 as set forth in §1.17(p).

☐ In accordance with §1.97(c), this Information Disclosure Statement is being filed after the period set forth in §1.97(b) above but before the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311, or an action that otherwise closes prosecution and that it is accompanied by one of:

- ☐ Statement in Accordance with §1.97(e)  
(attached); or
- ☐ Please charge Deposit Account No. 10-  
0750/ / the fee of \$180.00 as set forth  
in §1.17(p).

☐ In accordance with §1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under §1.113 or a Notice of Allowance under §1.311 but before the payment of the Issue Fee. Applicant(s) hereby petition(s) for consideration of this Information Disclosure Statement. Included are: Statement in Accordance with §1.97(e) as set forth below and the fee of \$180.00 as set forth in §1.17(p).

☐ Copies of each of the references listed on the attached Form PTO-1449 are enclosed herewith.

☐ Copies of references listed on the attached Form PTO-1449 are enclosed herewith EXCEPT THAT:

☐ In view of the voluminous nature of references [list as appropriate], and the likelihood that these references are available to the Examiner, copies are not enclosed herewith.

☐ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

☒ Copies of only foreign patent documents and non-patent literature are enclosed in accordance with 37 CFR 1.98 (a) (2).

☐ There are no listed references which are not in the English language.

☐ The relevance of those listed references which are not in the English language is as follows:

☐ Attached are copies of search report(s) from corresponding patent application(s), which are listed on the attached Submission Under MPEP 609 D.

☐ Attached are the following non-published pending patent applications which may be deemed relevant, which are listed on the attached Submission Under MPEP 609 D.

Please charge any deficiency or credit any overpayment to Deposit Account No. 10-0750/BIO5015NP/VJS. This form is submitted in triplicate.

Respectfully submitted,

/Vincent J. Serrao/  
Vincent J. Serrao, Reg. # 47,072  
Attorney for Applicants

Johnson & Johnson  
One Johnson & Johnson Plaza  
New Brunswick, NJ 08933-7003  
(732) 524-1163  
DATED: May 5, 2005



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 6

Application Number	10/624,151
Filing Date	July 21, 2003
First Named Inventor	Yaron Keidar
Group Art Unit	3739
Examiner Name	Vrettakos
Attorney Docket Number	BIO-5015NP

**U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear
		Number	Kind Code <sup>2</sup> (if known)			
		4,449,528		Auth et al.	05-22-84	
		4,522,205		Taylor et al.	06-11-85	
		4,569,801		Molloy et al.	02-11-86	
		4,641,649		Walinsky et al.	02-10-87	
		4,662,368		Hussein et al.	05-05-87	
		4,672,962		Hershenson	06-16-87	
		4,673,563		Berne et al.	06-16-87	
		4,676,258		Inokuchi et al.	06-30-87	
		4,790,311		Ruiz	12-13-88	
		4,807,620		Strul et al.	02-28-89	
		4,898,591		Jang et al.	02-06-90	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup>				
		WO	93/20767	A1	EP Technologies, Inc.	10-28-1993		
		WO	94/21165	A1	EP Technologies, Inc.	09-29-1994		
		WO	96/10961	A1	EP Technologies, Inc.	04-18-1996		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS, SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 2 of 6

Application Number	10/624,151
Filing Date	July 21, 2003
First Named Inventor	Yaron Keidar
Group Art Unit	3739
Examiner Name	Vrettakos
Attorney Docket Number	BIO-5015NP

**U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear
		Number	Kind Code <sup>2</sup> (if known)			
		4,998,933		Eggers et al.	03-12-91	
		5,035,694		Kasprzyk et al.	07-30-91	
		5,078,736		Behl	01-07-92	
		5,104,393		Isner et al.	04-14-92	
		5,178,618		Kandarpa	01-12-93	
		5,190,540		Lee	03-02-93	
		5,226,430		Spears et al.	07-13-93	
		5,292,321		Lee	03-08-94	
		5,348,554		Imran et al.	09-20-94	
		5,423,811		Imran et al.	06-13-95	
		5,427,119		Swartz et al.	06-27-95	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear	T <sup>6</sup>
		Office <sup>3</sup> KindCode <sup>5</sup>	Number <sup>4</sup>					
		WO	96/26675	A1	Boston Scientific Corporation	09-06-1996		
		WO	96/32897	A1	Jawahar M. Desai	10-24-1996		
		WO	97/32525	A1	Cardia Pathways Corp.	09-12-1997		
		WO	97/37607	A2	Cardima, Inc.	10-16-1997		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS, SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 3 of 6

<b>Application Number</b>	10/624,151
<b>Filing Date</b>	July 21, 2003
<b>First Named Inventor</b>	Yaron Keidar
<b>Group Art Unit</b>	3739
<b>Examiner Name</b>	Vrettakos
<b>Attorney Docket Number</b>	BIO-5015NP

**U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear
		Number	Kind Code <sup>2</sup> (if known)			
		5,449,380		Chin	09-12-95	
		5,487,385		Avitall	01-30-96	
		5,497,119		Tedrow et al.	03-05-96	
		5,505,730		Edwards	04-09-96	
		5,545,161		Imran	08-13-96	
		5,545,193		Fleischmann et al.	08-13-96	
		5,549,661		Kordis et al.	08-27-96	
		5,558,672		Edwards et al.	09-24-96	
		5,562,720		Stern et al.	10-8-96	
		5,564,440		Swartz et al.	10-15-96	
		5,569,241		Edwards	10-29-96	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup>				
		WO	98/02201	A1	Cardiac Pathways Corp.	01-22-1998		
		WO	99/00064	A1	Daig Corporation	01-07-1999		
		WO	99/02096	A1	The Regents of the University of California	01-21-1999		
		WO	01/68173	A3	Boston Scientific Limited	09-20-01		

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS, SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 4 of 6

Application Number 10/624,151

Filing Date July 21, 2003

First Named Inventor Yaron Keidar

Group Art Unit 3739

Examiner Name Vrettakos

Attorney Docket Number BIO-5015NP

**U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear
		Number	Kind Code <sup>2</sup> (if known)			
		5,575,766		Swartz et al.	11-19-96	
		5,575,788		Baker et al.	11-19-96	
		5,575,810		Swanson et al.	11-19-96	
		5,582,609		Swanson et al.	12-10-96	
		5,617,854		Munsif	4-8-97	
		5,658,278		Imran et al.	4-19-97	
		5,687,723		Avitall	11-18-97	
		5,688,267		Panescu et al.	11-18-97	
		5,697,927		Imran et al.	12-16-97	
		5,702,438		Avitall	12-30-97	
		5,722,403		McGee et al.	3-3-98	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup>				

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS, SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 5 of 6

<b>Application Number</b>	10/624,151
<b>Filing Date</b>	July 21, 2003
<b>First Named Inventor</b>	Yaron Keidar
<b>Group Art Unit</b>	3739
<b>Examiner Name</b>	Vrettakos
<b>Attorney Docket Number</b>	BIO-5015NP

**U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear
		Number	Kind Code <sup>2</sup> (if known)			
		5,769,846		Edwards et al.	6-23-98	
		5,938,660		Swartz et al.	8-17-99	
		5,971,983		Lesh	10-26-99	
		6,012,457		Lesh	1-11-00	
		6,024,740		Lesh et al.	2-15-00	
		6,117,101		Diederich et al.	9-12-00	
		4,938,217		Lee	07-03-90	
		5,295,484		Marcus	03-22-90	
		5,590,657		Cain et al.	01-07-97	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document mm-dd-yyyy	Pages, Columns, Lines, where relevant passages or relevant figures appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup>				

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS, SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 6 of 6

**Application Number** 10/624,151**Filing Date** July 21, 2003**First Named Inventor** Yaron Keidar**Group Art Unit** 3739**Examiner Name** Vrettakos**Attorney Docket Number** BIO-5015**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner's Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
		"ercutaneous Laser Balloon Coagulation of Accessory Pathways, by Linda P. McMath, et al., Proceedings of Diagnostic and Therapeutic Cardiovascular Interventions, pp 165-171, January 20-22, 1991.	
		"Long-term Effects of Percutaneous Laser Balloon Ablation from the Canine Coronary Sinus", by Claudio D. Schuger, MD, et al.; Circulation Vol. 86, No. 3, September, 1992.	
		"Induction of Hyperthermia Using an Intracavitary Multielement Ultrasonic Applicator", by Chris I. Diederich and Kullervo Hynynen, Transactions on Biomedical Engineering, Vol. 36, No. 4, pp 432-438, April, 1989.	
		"A Focal Source of Atrial Fibrillation Treated by Discrete Radiofrequency Ablation," Pierre Jais, MD, et al., Circulation Vol. 95, No. 3, February 4, 1997, pp 572-576.	
		"The Development of Intracavitary Ultrasonic Applicators for Hyperthermia: A Design and Experimental Study", C.J. Diederich et al., Medical Physics, Vol. 17, No. 4, pp 626-634 Jul/Aug 1990.	
		NASPE 17 <sup>th</sup> Annual Scientific Sessions Abstract Form, Biatial Dimensions Relevant to Catheter Ablation, Pierre Jais, MD, et al., December 1, 1995.	
		"Right and Left Atrial Radiofrequency Catheter Therapy of Paroxysmal Atrial Fibrillation", Michel Haissaguerre, MD, et al., Journal of Cardiovascular Electrophysiology, Vol. 7, No. 12, pp1133-1144, December 1996.	
		"Nonpharmacologic Management, Catheter Ablation", Gerhard Hindricks, MD, et al., Current Management of Arrhythmias, pp 373-378, 1991.	
		"The Surgical Treatment of Atrial Fibrillation. I. Summary" Cox, J.L. et al., Thoracic and Cardiovascular Surgery 101(3), pp 402-405 (1991).	
		"The Surgical Treatment of Atrial Fibrillation. Cox, J.L., et al., IV Surgical Technique", Thoracic and Cardiovascular Surgery 101(4), pp 584-592 (1991).	
		"Simple Left Atrial Procedure for Chronic Atrial Fibrillation Associated with Mitral Valve Disease", Sueda et al. 1996.	
		"Feasibility of RF Powered Thermal Balloon Ablation of Atrioventricular Bypass Tracts via the Coronary Sinus: In vivo Canine Studies," PACE, Fram et al., Vol, 18, p 1518-1530 (1995).	
		"Laser Machining of High Density Two-Dimensional Ultrasound Arrays", Corbett et al., MicroSound Systems, Inc, 349*25 SE Douglass Street, Snoqualmic, WA 98065	

Examiner Signature	Date Considered
-----------------------	--------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U. S. Patent and Trademark Office, Washington, DC 20231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.